

52

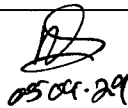
<b>DART AEROSPACE LTD</b>		<b>Work Order:</b>	22024
<b>Description:</b> Doubler		<b>Part Number:</b>	D3144-121
<b>Dwg:</b> D3144 Rev. B page 7 04.12.01 <del>RF</del>		<b>Qty:</b>	10
Page 1 of 1			

Step	Location	Procedure	By	Date	Qty
1	DC	Issue Traveler	RF	04.12.08	10
2	PG	Issue P/O: <u>2007542</u> <b>Email or Ship DXF file to vendor</b> Laser Cut D3144-121 flat pattern per Dwg D3144 Possible Supplier: GFI or Industrial Laser <b>Material release note is required</b>	U	05-02-10	10
3	RG	Receive and Inspect for transit damage <b>Enure material release note is attached</b>	CL	05/03/01	10
4	QC6	Inspect dimensions as per Dwg D3144	RF	05.03.10	9
5	GA	Deburr	SB	05/04/12	9
6	FP	Chemical Conversion Coat per QSI 005 4.1	ml	05-04-15	9
7	FP	Powder Coat Black Sandtex (Ref: 4.3.5.7) per QSI 005 4.3	ml	05/04/25	9
8	QC3	Inspect Powder Coat	ml	05-04-25	9
9	ST	Identify and Stock	ml	05-04-25	9
10	AC	Cost / part: <u>21.23</u>	Syc	05-04-26	9
11	DC	Close W/O <u>21.06</u> Inspect Level 21	RF	05.04.29	9

PTD

Rev	Date	Change	Revised By	Approved
A	04.11.29	New issue	KJ/RF	

RELEASED  
04.11.30

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Mfg / Design Mgr	Approval QC Inspector
05.03.10	4	<del>KE</del> (1) KEPT IN STORES FOR TEMPLATE	DF	05.03.10	1	DF 05.03.10	 05.04.29

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Design Mgr	Approval QC Inspector
			Initial Design Mgr	Action Description Design Mgr	Sign & Date			

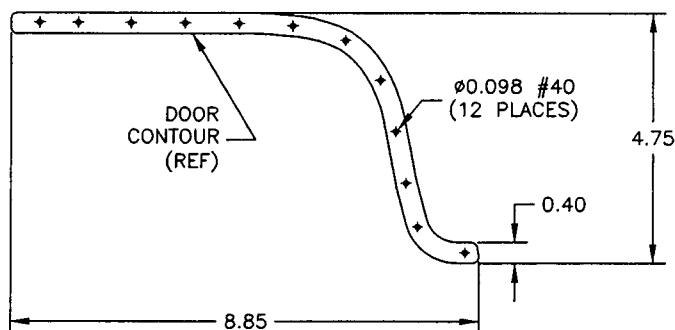
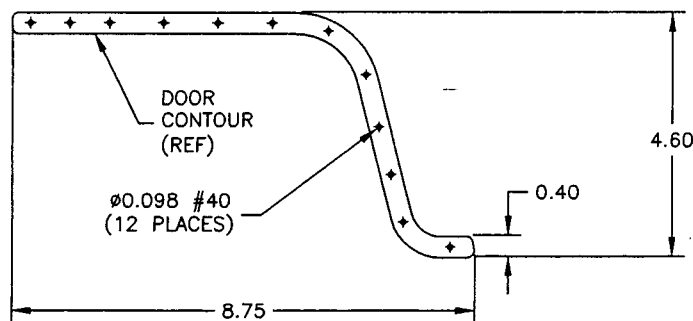
Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

NOTE: Date &amp; initial all entries

QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

**DART**

DESIGN RF	DRAWN BY RF	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED [Signature]	APPROVED [Signature]	DRAWING NO. D3144	REV. B SHEET 7 OF 9
DATE 04.09.17		TITLE DOUBLER	SCALE NTS

RELEASED  
04.11.23 [Signature]**D3144-107 DOUBLER (FOR D412-694-03)****D3144-121 DOUBLER (FOR D412-694-04)**

SHOP COPY  
RETURN TO  
ENGINEERING  
UNCONTROLLED COPY  
SUSCEPTIBLE TO AMENDMENT  
WITHOUT NOTICE  
WORK ORDER  
NO. 22024

**D3144-107/-121 NOTES:**

- 1) MATERIAL: 2024-T3 SHEET (QQ-A-250/4) 0.032 THICK (REF DART SPEC M2024T3S.032)
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1  
POWDER COAT BLACK SANDTEX (4.3.5.7) PER DART QSI 005 4.3
- 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) ALL DIMENSIONS ARE IN INCHES
- 5) BREAK ALL SHARP EDGES 0.005 TO 0.010
- 6) MACHINE PER DRAWING FILE "D3144-B7.DWG"

Copyright © 2002 by DART AEROSPACE LTD

THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.

# Job Costing Report

Dart Aerospace Ltd.  
Hawkesbury

Dec 06, 2004  
11:09 am

Work Order No : 0022024  
Project Name : D3144-121  
Project For : WK452  
Work Order Type : Main  
Main WO Number :  
House Part Number : D3144-121  
Description : Doubler  
Manufactured : Yes  
Amount Req'd : 10  
Amount Done : 0  
Start Date : 12-03-04  
Est Finish Date : 12-21-04  
Act Finish Date :  
Drawings Req'd : No  
Ok for Approval :  
Approval Rec'd :

Department Code:  
Burden Flags : NNNNNNNN  
WO Status : Open  
Invoice State : Not Invoiced  
Invoice Date :  
Invoice Number :  
Invoice Amount : 0.00  
Order Entry No :  
OE Value : 0.00  
Est Margin : 0.000%  
Actual Margin : 0.000%  
\$0 Posted to Finished Goods

	Estimated	Actual	Var. %	Posted	To Post
Material Cost :	0.00	0.00	0.00	0.00	0.00
Engineering Hours :	0.00	0.00	0.00		
Engineering Cost :	0.00	0.00	0.00	0.00	0.00
Production Hours :	0.00	0.00	0.00		
Production Cost :	0.00	0.00	0.00	0.00	0.00
Packaging Hours :	0.00	0.00	0.00		
Packaging Cost :	0.00	0.00	0.00	0.00	0.00
OverHead Hours :	0.00	0.00	0.00		
OverHead Cost :	0.00	0.00	0.00	0.00	0.00
CNC Hours :	0.00	0.00	0.00		
CNC :	0.00	0.00	0.00	0.00	0.00
Misc. Hours :	0.00	0.00	0.00		
Misc. :	0.00	0.00	0.00	0.00	0.00
Burden :	0.00	0.00	0.00		
Total Cost :	0.00	0.00	0.00		
Margin :	0.000	0.000			
Selling Cost :	0.00	0.00			

	Estimated	Actual
Labour Hrs/Amount Done :	0.00	0.00
Profits/(Loss) :	0.00	0.00

CERTIFICATE OF COMPLIANCE  
CERTIFICAT DE CONFORMITE



Membre de / A Member of **Thomas & Betts**

180 LABROSSE AVENUE  
POINTE CLAIRE, QC  
H9R 1A1

**DART AEROSPACE LTD**  
1270 ABERDEEN ST.  
HAWKESBURY, ON K6A 1K7

CERTIFICATE NO. 1 OUR JOB NO J0124332 SHIPPING MEMO 0292749

ITEM	QUANTITY	PURCHASE ORDER	PART NUMBER	REV	NAME	DWG ISSUE
<u>1</u>	<u>10 PCS</u>	<u>2007542</u>	<u>D3144-121</u>		<u>DOUBLER</u>	<u>B</u>

MATERIAL AL 2024-T3 (QQ-A-250/4) SUPPLIED BY SAMUEL / KAISER ALUMINUM MAT. REL. NO. 226511 ATT'D

	PROCESS	PROCESSOR	RELEASE NOTE #
1			
2			
3			
4			
5			
6			
7			
8			
9			

WE HEREBY CERTIFY ALL THE PARTS COVERED BY THIS CERTIFICATE HAVE BEEN MANUFACTURED FROM MATERIAL SUPPLIED ON RELEASE NOTE SHOWN ABOVE AND THAT ALL PARTS HAVE BEEN INDIVIDUALLY INSPECTED AND CONFORM TO THE DRAWINGS AND PURCHASE ORDER REFERENCED ABOVE.

DATE 24 FEBRUARY 2005

G.F.I. Q.C. REP. *Robert Hardy*





007-05

Programme d'Assurance Qualité Enregistré / Registered Q.A. Program  
ISO 9001:2000 AS9100

### LETTRE DE CONFORMITÉ - LETTER OF COMPLIANCE

Date: 7 JANVIER 2005

Company Name: G.F.I. Division of Thomas & Betts, Limited  
Address: 180 avenue Labrosse  
City: Pointe Claire, Qué.  
Zip Code: H9R 1A1

# du client: 0058243

# de commande SSMQ: 834566

Customer's order #:

SSMQ's Order #:

La présente est pour certifier que le matériel détaillé ci-dessous est conforme aux exigences de votre commande et des normes du grade tel que décrit:

The following is to certify that the material listed below meets your order requirements and grade standards as described:

Item #	otre/Our # de pièces/ # of pieces	Épaisseur/Grandeur Guage/Size	Alliage/Trempe Alloy/Temper	Spécification / Specification	Lot/Heat
2	2	.032" x 48" x 144"	2024 T3	AMS-QQ-A-250/4	226511

Bien à vous,  
Yours truly,



Commis à l'administration.  
Administration Clerk.



## SHIP TO:

LES METAUX SPECIALISES SAMUEL  
(SHIP TO)  
21525 CLARK GRAHAM  
BAIE D'URFE, PQ, CA H9X3T5

**KAISER  
ALUMINUM**

Trentwood Works - Spokane, WA 99215  
Phone: (800) 367-2586

## CERTIFIED TEST REPORT

Serial Number  
4011938

## SOLD TO:

SAMUEL SON & CO LTD  
2225 FRANCIS HUGHES  
LAVAL, PQ, CA H7S1N5

CUSTOMER PO NUMBER: N16221		CUSTOMER PART NUMBER:		SHIPPING RUN #/LOAD ID: 100089/2		GOV'T CONTRACT NUMBER:	
KAISER ORDER NO: 1008983	LINE ITEM: 1	SHIP DATE: 9-JUL-2004		ALLOY: 2024	CLAD: BARE	TEMPER: T3	
WEIGHT SHIPPED: 3928 LB	QUANTITY: 173 PCS EST.	B/L NUMBER: 202031		GAUGE: 0.0320 IN	WIDTH: 48.00 IN	LENGTH: 144.000 IN	

## Certified Specifications

AMS 4037/RevN

AMS-QQ-A-250/4/RevA

ASTM B 209/Rev04

Test Code: 1504

## Test Results

Lot: 226511 Cast

Drop

Ingot

Tensile:	Temper	Dir / # Tests	Ultimate KSI (MPA)	Yield KSI (MPA)	Elongation %
	T3	LT / 2 (Min:Max)	67.4 : 67.6 (465 : 466)	45.2 : 45.3 (312 : 312)	17.8 : 18.3

Chemistry:	SI	FE	CU	MN	MG	CR	ZN	TI	V	ZR	OTHER
Actual	0.08	0.22	4.46	0.55	1.32	0.01	0.17	0.01	0.01	0.00	TOT 0.06

## ALLOY LIMITS

Chemistry:	SI	FE	CU	MN	MG	CR	ZN	TI	V	ZR	OTHER	MAX
2024 MIN	0.00	0.00	3.80	0.30	1.20	0.00	0.00	0.00	0.00	0.00	EACH	0.05
MAX	0.50	0.50	4.90	0.90	1.80	0.10	0.25	0.15	0.05	0.05	TOT	0.15

Aluminum Remainder

## CERTIFICATION

KAISER ALUMINUM & CHEMICAL CORPORATION (KAISER) HEREBY CERTIFIES THAT METAL SHIPPED UNDER THIS ORDER WAS MANUFACTURED IN THE U.S.A. AND HAS BEEN INSPECTED, TESTED, AND FOUND IN CONFORMANCE WITH THE REQUIREMENTS OF THE APPLICABLE SPECIFICATIONS AS INDICATED HEREIN. ALL METAL WHICH IS SOLUTION HEAT-TREATED COMPLIES WITH AMS 2772 (MIL-H-6088). ANY WARRANTY IS LIMITED TO THAT SHOWN ON KAISER'S STANDARD GENERAL TERMS AND CONDITIONS OF SALE. TEST REPORTS ARE ON FILE, SUBJECT TO EXAMINATION. ISO-9001:2000 CERTIFIED

BILL POYNOR, LABORATORIES SUPERVISOR

